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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,660	07/21/2003	Takashi Yamaguchi	2018-743	3836
23117	7590	03/08/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			BETTS JR, ROGER D	
			ART UNIT	PAPER NUMBER
			1723	
DATE MAILED: 03/08/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,660	Applicant(s) YAMAGUCHI ET AL.	
	Examiner Roger D. Betts Jr.	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/12/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether the applicants utilization of the word "among" refers to plurality of holes designed of a combination of any two shapes (i.e. hemisphere, straight bore, and/or tapered bore) or should the two shapes be selected from "among" a group consisting of an approximate hemisphere, a straight bore, and a tapered bore.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-10, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Neuman (U.S. Patent No. 5,062,952). Neuman (952) discloses a filter #13 that fits in the bore of a fluid passage body (Fig. 1, #14; Col. 2, 57-59 (upon attachment #14 becomes the fluid passage body) when the filter comprises an inlet section (Fig. 2, the portion including threads #29), a filter section integral with inlet section defining a plurality of holes (Fig. 3, #35), wherein the closed end section (Fig. 1, #28) is shaped such that a cross-sectional area between an outer surface of the closed end and inner surface of the fluid passage body increases gradually in a fluid flow direction (in Fig. 1, because of the angled portion of #28, the cross-sectional area between #28 and bore #26 gradually increases in the fluid flow direction),

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wherein the inlet section defines an opening opposite the closed end section (Fig. 1, #16), wherein fluid passes through an inside of the filter section, through the plurality of holes and through the tubular passage to the injector (Col. 3, 28-41; Col. 5, 9-43) [as in claim 1,4, 9 and 13], wherein the closed end section is conically shaped (Fig. 1, #28) [as in claim 3], wherein each of the plurality of holes is tapered to have diameter gradually increasing toward the outer side of the filter (Fig. 2, #35) [as in claim 5,6] and having no holes disabling flow [as in claim 10]. For examination purposes, integral is defined as a combination of one or more components to form a single unit as disclosed in the threaded configuration in this prior art reference. As for claims 7-8, Neuman (952) teaches bores that are straight, cylindrical and also tapered shaped (Fig. 3, #37- #39).

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman (952) in view of Stamstad (U.S. Patent No. 4,882,055). Neuman (952) was expanded above. However, Neuman (952) fails to disclose a hemispherically shaped closed end [as in claim 2]. However, Stamstad (055) discloses a hemispherally shaped (Fig. 1, #56). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Neuman (952) invention in view of Stamstad (055) for the closed end to have a hemispherical shape, since Stamstad (055) teaches the benefit of customizing the shape of the filter to suit the application, and because it is considered to be a matter of choice which a person of ordinary

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skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed closed end was significant (In *re Dailey*, 357 F. 2d 669, 149 USPQ 47 (CCPA 1966))

4. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman (952) in view of Verlag (US Publication XP-000766379). Neuman (952) was expanded above [as in claim 15]. However, Neuman (952) fails to disclose a tubular fluid passage that has a cross-sectional area equivalent to or smaller than a summation of cross sectional areas of the holes at the peripheral surface of the filter section [as in claim 11]. Verlag (XP-000766379) discloses a tubular fluid passage that has a cross-sectional area equivalent to or smaller than a summation of cross sectional areas of the holes at the peripheral surface of the filter section. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Neuman (952) invention in view of Verlag (XP-000766379), since Verlag teaches the benefit of minimizing the pressure loss at a high velocity of supplying the solution.

Response to Arguments

5. Applicant's arguments with respect to claims 1-11, 13 and 15 but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger D. Betts Jr. whose telephone number is (571) 272-8153. The examiner can normally be reached on Monday-Friday from 7:30 a.m. to 4:00 p.m.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained

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from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


RBJ


TERRY K. CECIL
PRIMARY EXAMINER